SUMMARY OF THE INVENTION

[0004a] In one aspect, there is provided a method for generating a representation of a geological structure, which comprises: mapping a plurality of source data points to a common point cloud; creating a sorted point cloud collection with a footprint representing a boundary by sorting points in the common point cloud according to a distance of each of the plurality of source data points from an origin; creating a new point cloud by reducing the footprint of the sorted point cloud collection; and creating a representation of a geological structure by gridding points in the new point cloud using a computer processor.

[0004b] In another aspect, there is provided a non-transitory program carrier device tangibly carrying computer-executable instructions for generating a representation of a geological structure, the instructions being executable to implement: mapping a plurality of source data points to a common point cloud; creating a sorted point cloud collection with a footprint representing a boundary by sorting points in the common point cloud according to a distance of each of the plurality of source data points from an origin; creating a new point cloud by reducing the footprint of the sorted point cloud collection; and creating a representation of a geological structure by gridding points in the new point cloud.

[0004c] In yet another aspect, there is provided a non-transitory program carrier device tangibly carrying computer-executable instructions for generating a representation of a geological structure, the instructions being executable to implement: mapping a plurality of source data points to a common point cloud in a coordinate system of the plurality of source data points; creating a sorted point cloud collection with a footprint by sorting points in the common point cloud according to a distance of each of the plurality of source data points from an origin; creating a new point cloud by reducing the footprint of the sorted point cloud collection; and creating a representation of a geological structure by gridding points in the new point cloud.